



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Admistrative Commissioner for Patents  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/579,518	04/06/2007	Lothar Lais	ERT 208	8418
7590	10/01/2010		EXAMINER	
Horst M. Kasper 13 Forest Drive Warren, NJ 07059			GLASS, ERICK DAVID	
			ART UNIT	PAPER NUMBER
			2837	
			MAIL DATE	DELIVERY MODE
			10/01/2010	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/579,518	<b>Applicant(s)</b> LAIS, LOTHAR
	<b>Examiner</b> Erick Glass	<b>Art Unit</b> 2837

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If no period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED. (35 U.S.C. § 133).

Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on \_\_\_\_.
- 2a) This action is FINAL.      2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 2-5,9,10,13,14,16-20,22-24 and 26-30 is/are pending in the application.
  - 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) 5,17,18,24 and 26-30 is/are allowed.
- 6) Claim(s) 2-4,9,10,13,14,16,19,20,22,23 is/are rejected.
- 7) Claim(s) \_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.
 

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) All    b) Some \* c) None of:
    1. Certified copies of the priority documents have been received.
    2. Certified copies of the priority documents have been received in Application No. \_\_\_\_.
    3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_
- 4) Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_
- 5) Notice of Informal Patent Application
- 6) Other: \_\_\_\_

***Claim Objections***

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2, 3, 4, 9, 10, 13, 14, 19, 20, and 22-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Andersen (US 5,773,943) in view of Becker (US 5,245,258).

With respect to claim 2, Andersen teaches a drive device for passage barriers (abstract) or thoroughfare barriers and door or gate drives, having a brushless DC servo motor, characterized in that a DC servo motor (fig. 2, 11) has an associated servo controller (fig. 9, 50) and the output shaft (fig. 3, 8) of the DC servo motor; the drive shaft (fig. 3, 4) of the barrier element; a horizontal plate (fig. 3, 20) wherein the DC-servo motor is attached from ; wherein the output shaft penetrates (fig. 3, shaft 8 penetrates up through horizontal plate) through the horizontal plate and is attached to a vertical edge of the barrier element; a post (fig. 3, 4) attached to the upper side of the horizontal plate and surround the drive shaft in an area disposed above the horizontal plate; and characterized by a compact complete control device which comprises the servo controller (fig. 9, 50) and a logic section (fig. 9, 52) and a housing (fig. 3, 18), and which serves to control (column 7, lines 5-15) the motor as a function of signals.

Anderson does not teach the drive shaft directly connected without an interconnection of a gear mechanism. Becker the drive shaft directly (fig. 2, 23 directly connect to 21, motor) connected without an interconnection of a gear mechanism. It is commonly known in dc servo driven barriers to have a direct connection between the drive shaft and the motor, as taught by Becker providing simplified design and maintenance.

Anderson does not teach servo motor mounted to horizontal plate. It would have been an obvious matter of design choice to mount the motor to the horizontal plate, since applicant has not disclosed that it solves any stated problem and it appears that the invention would perform equally well with motor not being bolted to above plate.

Anderson does not teach the housing not containing the dc servo motor. It would have been obvious to one having ordinary skill in the art at the time of the invention to have a separate housing for the control system to provide the advantages of electrical access and safety, as it is commonly known in the art.

With respect to claim 3, Andersen does not teach characterized in that the logic section is designed as a pluggable logic circuit board. Becker teaches in that the logic section is designed as a pluggable logic (fig. 2, 5) circuit board. It would have been obvious to one having ordinary skill in the art at the time of the invention to incorporate a pluggable logic board to the motor control system of Anderson for the advantage of to accomplish an easily installed assembly which can be programmed as desired, as taught by Becker (column 5, lines 49-55; column 7, lines 34-52).

With respect to claim 4, Andersen does not teach that different logic circuit boards can be plug-connected, different movement profiles and programs which are directed at various applications are prespecified on said logic circuit boards, and said logic circuit boards have different numbers of inputs and outputs and different operator control and display elements, depending on requirements. Becker teaches different logic circuit boards can be plug-connected, different movement profiles and programs which are directed at various applications are prespecified on said logic circuit boards, and said logic circuit boards have different numbers of inputs and outputs and different operator control and display elements, depending on requirements (column 5, lines 49-55; column 7, lines 46-52). It would have been obvious to one having ordinary skill in the art at the time of the invention to incorporate a pluggable logic board that has the advantage of being able to be programmed as desired, as taught by Becker (column 5, lines 49-55).

With respect to claim 9, Andersen teaches a drive device for passage barriers (abstract) or thoroughfare barriers and door or gate drives, having a brushless DC servo motor, characterized in that a DC servo motor (fig. 2, 11) has an associated servo controller (fig. 9, 50) and the output shaft (fig. 3, 8) of the DC servo motor; the drive shaft (fig. 3, 4) of the barrier element; a horizontal plate (fig. 3, 20) wherein the DC-servo motor is attached from; wherein the output shaft penetrates (fig. 3, shaft 8 penetrates up through horizontal plate) through the horizontal plate and is attached to a vertical edge of the barrier element; a post (fig. 3, 4) attached to the upper side of the

horizontal plate and surround the drive shaft in an area disposed above the horizontal plate.

Anderson does not teach the drive shaft directly connected without an interconnection of a gear mechanism. Becker the drive shaft directly (fig. 2, 23 directly connect to 21, motor) connected without an interconnection of a gear mechanism. It is commonly known in dc servo driven barriers to have a direct connection between the drive shaft and the motor, as taught by Becker providing simplified design and maintenance.

Anderson does not teach servo motor mounted to horizontal plate. It would have been an obvious matter of design choice to mount the motor to the horizontal plate, since applicant has not disclosed that it solves any stated problem and it appears that the invention would perform equally well with motor not being bolted to above plate.

Anderson does not teach a commutation and position control in the motor are performed by means of a magnetoresistive sensor. Becker teaches a commutation and position control (column 6, lines 25-40) in the motor are performed by means of a magnetoresistive sensor (column 6, lines 25-27;"inductive measuring device"). It would have been obvious to one having ordinary skill in the art at the time of the invention to include a sensor to provide the advantage of getting feedback of speed/position signals, as taught by Becker.

With respect to claim 10, Andersen teaches a drive device for passage barriers (abstract) or thoroughfare barriers and door or gate drives, having a brushless DC

servo motor, characterized in that a DC servo motor (fig. 2, 11) has an associated servo controller (fig. 9, 50) and the output shaft (fig. 3, 8) of the DC servo motor; the drive shaft (fig. 3, 4) of the barrier element; a horizontal plate (fig. 3, 20) wherein the DC-servo motor is attached from ; wherein the output shaft penetrates (fig. 3, shaft 8 penetrates up through horizontal plate) through the horizontal plate and is attached to a vertical edge of the barrier element; a post (fig. 3, 4) attached to the upper side of the horizontal plate and surround the drive shaft in an area disposed above the horizontal plate.

Anderson does not teach the drive shaft directly connected without an interconnection of a gear mechanism. Becker the drive shaft directly (fig. 2, 23 directly connect to 21, motor) connected without an interconnection of a gear mechanism. It is commonly known in dc servo driven barriers to have a direct connection between the drive shaft and the motor, as taught by Becker providing simplified design and maintenance.

Anderson does not teach servo motor mounted to horizontal plate. It would have been an obvious matter of design choice to mount the motor to the horizontal plate, since applicant has not disclosed that it solves any stated problem and it appears that the invention would perform equally well with motor not being bolted to above plate.

Andersen does not teach commutation and position control in the motor are performed by means of resolvers or encoders or Hall sensors. Becker teaches a

commutation and position control (column 6, lines 25-40) in the motor are performed by means of resolvers or encoders or Hall sensors (fig. 2, 31, 32).

With respect to claim 13, Andersen does not teach in that the inputs and outputs are separate from the actual motor control system/logic circuit board and designed as an independent module. Becker teaches the inputs and outputs are separate from the actual motor control system (fig. 2, 21, 22)/logic circuit board and designed as an independent module (fig. 2, 6). It would have been obvious to one having ordinary skill in the art at the time of the invention to incorporate a pluggable logic board with various input/outputs that has the advantage of being able to be programmed as desired, as taught by Becker (column 5, lines 49-55).

With respect to claim 14, Andersen does not teach in that the inputs and outputs can be connected by a pluggable bus connection or a pluggable, multicore cable. Becker teaches the inputs and outputs can be connected by a pluggable bus connection or a pluggable, multicore cable (column 7, lines 10-52). It would have been obvious to one having ordinary skill in the art at the time of the invention to incorporate a pluggable logic board with multiple pins/cables/control signals that has the advantage of being able to be programmed, as taught by Becker (column 5, lines 49-55).

With respect to claim 19, Anderson teaches a drive device for passage barriers (abstract) or thoroughfare barriers and door or gate drives, comprising a horizontal plate having a hole (fig. 3, 20 horizontal plate with hole for shaft 8 the thread through); a brushless DC servo motor (fig. 2, 11) mounted from below to horizontal plate; an output

shaft (fig. 3, 8) formed at the brushless DC servo motor, extending through the hole in the horizontal plate to an upper side of the horizontal plate (fig. 3, above floor 6) and having an axis (fig. 3, dash line down 4 and 8); a barrier element (abstract) disposed on the upper side of the horizontal plate (fig. 3, barrier is on upper side of floor 6) ; a drive shaft (fig. 3, 4) formed at the barrier element and having an axis (fig. 3, dash line down 4 and 8), wherein the output shaft of the brushless DC servo motor is solidly attached to the drive shaft formed at the barrier element (fig. 1, 1) and wherein the axis of the output shaft and the axis of the of the drive shaft coincide (fig. 3); a servo controller (fig. 9, 50) connected to the brushless DC servo motor; and further comprising a post (fig. 3, 4) attached to upper side of the horizontal plate and surrounding the drive shaft (fig. 3, 8) in an area disposed above the horizontal plate (fig. 3, 20). Andersen does not teach a transmitter system which is integrated in the motor and supplies the required control signals. Becker teaches teach a transmitter system (fig. 2, 4) which is integrated in the motor and supplies the required control signals (column 5, lines 49-55). It would have been obvious to one having ordinary skill in the art at the time of the invention to incorporate a pluggable logic board/control system that has the advantage of being able to be programmed as desired, as taught by Becker (column 5, lines 49-55).

With respect to claim 20, Andersen and Becker do not teach in that the motor mount is formed as a fixed mount on the side of the transmitter system. Becker discloses the claimed invention except for the fixed mount. It would have been obvious to one having ordinary skill in the art at the time the invention was made to made the circuit assembly fixed, since it has been held that forming in one piece an article which

has formerly been formed in two pieces and put together involves only routine skill in the art. *Howard v. Detroit Stove Works*, 150 U.S. 164 (1993). It would have been an obvious matter of design choice to mount the motor to the horizontal plate, since applicant has not disclosed that it solves any stated problem and it appears that the invention would perform equally well with motor not being bolted to above plate.

With respect to claim 22, Andersen does not teach in that the plug connection is designed to be secure against polarity reversal and is provided with a locking means. Becker teaches the plug connection is designed to be secure against polarity reversal and is provided with a locking means (column 7, lines 46-52). It would have been obvious to one having ordinary skill in the art at the time of the invention to incorporate a pluggable logic board that has the advantage of being able to be programmed as desired such as locking means, as taught by Becker (column 5, lines 49-55).

With respect to claim 23, Anderson teaches a drive device for passage barriers (abstract) or thoroughfare barriers and door or gate drives, comprising a horizontal plate having a hole (fig. 3, 20 horizontal plate with hole for shaft 8 the thread through); a brushless DC servo motor (fig. 2, 11) mounted from below to horizontal plate; an output shaft (fig. 3, 8) formed at the brushless DC servo motor, extending through the hole in the horizontal plate to an upper side of the horizontal plate (fig. 3, above floor 6) and having an axis (fig. 3, dash line down 4 and 8); a barrier element (abstract) disposed on the upper side of the horizontal plate (fig. 3, barrier is on upper side of floor 6) ; a drive shaft (fig. 3, 4) formed at the barrier element and having an axis (fig. 3, dash line down 4 and 8), wherein the output shaft of the brushless DC servo motor is solidly attached to

the drive shaft formed at the barrier element (fig. 1, 1) and wherein the axis of the output shaft and the axis of the of the drive shaft coincide (fig. 3); a servo controller (fig. 9, 50) connected to the brushless DC servo motor; and further comprising a post (fig. 3, 4) attached to upper side of the horizontal plate and surrounding the drive shaft (fig. 3, 8).

Anderson does not teach a commutation and position control in the motor are performed by means of a magnetoresistive sensor. Becker teaches a commutation and position control (column 6, lines 25-40) in the motor are performed by means of a magnetoresistive sensor (column 6, lines 25-27;"inductive measuring device"). It would have been obvious to one having ordinary skill in the art at the time of the invention to include a sensor to provide the advantage of getting feedback of speed/position signals, as taught by Becker.

Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Andersen (US 5,773,943) in view of Becker (US 5,245,258) and Heise (US 4,530,183)

With respect to claim 16, Andersen teaches drive device for passage barriers (abstract) or thoroughfare barriers and door or gate drives, comprising a horizontal plate having a hole (fig. 3, 20 horizontal plate with hole for shaft 8 the thread through); a brushless DC servo motor (fig. 2, 11) mounted from below to horizontal plate; an output shaft (fig. 3, 8) formed at the brushless DC servo motor, extending through the hold in the horizontal plate to an upper side of the horizontal plate (fig. 3, above floor 6) and having an axis (fig. 3, dash line down 4 and 8); a barrier element (abstract) disposed on the upper side of the horizontal plate (fig. 3, barrier is on upper side of floor 6) ; a drive shaft (fig. 3, 4) formed at the barrier element and having an axis (fig. 3, dash line down

4 and 8), wherein the output shaft of the brushless DC servo motor is solidly attached to the drive shaft formed at the barrier element (fig. 1, 1) and wherein the axis of the output shaft and the axis of the of the drive shaft coincide (fig. 3); a servo controller (fig. 9, 50) connected to the brushless DC servo motor; and further comprising, a logic section (fig. 9, 52) connected to the servo controller; a housing (fig. 3, 18) surrounding the servo controller and the logic section, wherein the servo controller, the logic section, and the housing form a compact complete control device which serves to control the brushless DC servo motor as a function of signals (column 5, lines 45-62).

Anderson does not teach servo motor mounted to horizontal plate. It would have been an obvious matter of design choice to mount the motor to the horizontal plate, since applicant has not disclosed that it solves any stated problem and it appears that the invention would perform equally well with motor not being bolted to above plate.

Anderson does not teach wherein the servo controller is furnished as a circuit board. Becker teaches a circuit board (fig. 2, 6). It would have been obvious to one having ordinary skill in the art at the time of the invention to use a circuit board with plug in capabilities that has the advantage of being able to be programmed as desired, as taught by Becker (column 5, lines 49-55). Anderson and Becker does not teach a locking unit furnishing safe operation and holding in a open or closed position, allowing barrier to stop in any position. Heise teaches a locking unit and the barrier stopping in any position (fig. 5, 80 and 96). It would have been obvious to one having ordinary skill in the art at the time of the invention to use a locking unit and stopping position, to provide the advantage of being held open or closed, as taught by Heise. Anderson and

Becker does not teach an energy storing mean wherein the barrier is automatically moved to open position in power failure. It would have been obvious to one having ordinary skill in the art at the time the invention was made to automatically because its known in the art of power closures to open in event of a power failure for safety purposes.

***Allowable Subject Matter***

Claims 5, 17, 18, 24, and 26-30 are allowable.

***Response to Arguments***

Applicant's arguments filed 6/16/10 have been fully considered but they are not persuasive.

Applicant's arguments with respect to claims 2, 9, and 10 have been considered but are moot in view of the new ground(s) of rejection.

Applicant's sole argument is that the device of Anderson is more complex and very different than the present invention. The examiner believes the Anderson reference along with the other 103 references read strongly on the claimed invention.

Applicant should submit an argument under the heading "Remarks" pointing out disagreements with the examiner's contentions. Applicant must also discuss the references applied against the claims, explaining how the claims avoid the references or distinguish from them.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Erick Glass whose telephone number is (571)272-8395. The examiner can normally be reached on 9-5 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Walter Benson can be reached on 571-272-2227. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Walter Benson/  
Supervisory Patent Examiner, Art Unit 2837

/Erick Glass/  
Examiner, Art Unit 2837